



# UNITED STATES PATENT AND TRADEMARK OFFICE

NV

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,229	09/24/2003	Junichiro Osako	XA-9932	2049
181	7590	01/04/2005	EXAMINER	
MILES & STOCKBRIDGE PC 1751 PINNACLE DRIVE SUITE 500 MCLEAN, VA 22102-3833			TAYLOR, APRIL ALICIA	
			ART UNIT	PAPER NUMBER
			2876	

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/668,229

Applicant(s)

OSAKO ET AL.

Examiner

April A. Taylor

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 25-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Receipt is acknowledged of the Amendment filed 21 September 2004.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-11 and 25-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Gogami et al (US 6,076,737), hereinafter Gogami.

Re claims 1, 3, and 7: Gogami teaches an IC card comprising a semiconductor device having a semiconductor chip at least partially sealed with a first sealing portion made of a thermosetting resin material and having, over a first surface, an external connection terminal electrically connected to the semiconductor chip; a case which is made of a thermoplastic resin material and on which the semiconductor device is loaded; and a second sealing portion which is made of a thermoplastic resin material bonded to the case and sealing the semiconductor device so as to expose the external connection terminal, thereby integrating the semiconductor device with the case (see col. 4, line 18 to col. 7, line 64; col. 9, lines 1+).

Re claim 2: Gogami teaches wherein the semiconductor device comprises a wiring substrate providing the first surface over which the external connection terminal is formed and an interconnect, wherein the semiconductor chip is disposed over the wiring

substrate and electrically connected to the external connection terminal via the interconnect (see col. 4, line 18 to col. 7, line 64).

Re claim 4: Gogami teaches wherein the semiconductor device has a connecting member for electrically connecting the interconnect of the wiring substrate with the semiconductor chip, and the first sealing portion covers the connecting member (see col. 4, line 18 to col. 7, line 64).

Re claim 5: Gogami teaches wherein the semiconductor chip is disposed over a surface of the wiring substrate on a side opposite to a surface over which the external connection terminal is formed (see col. 4, line 18 to col. 7, line 64).

Re claim 6: Gogami teaches wherein the second sealing portion is formed to cover a region, other than the external connection terminal, of the first surface of the semiconductor device (see col. 4, line 18 to col. 7, line 64).

Re claim 8: Gogami teaches wherein the second sealing portion is welded with the interface portion of the case (see col. 4, line 18 to col. 7, line 64).

Re claim 9: Gogami teaches wherein the first surface of the semiconductor device has a projecting portion, the external connection terminal is formed over the projecting portion of the first surface, and the second sealing portion is formed to cover a region, other than the projecting portion, of the first surface (see col. 4, line 18 to col. 7, line 64).

Re claim 10: Gogami teaches wherein the first sealing portion is made of an epoxy resin containing a silica filler (see col. 10, lines 38+)

Art Unit: 2876

Re claim 11: Gogami teaches wherein the semiconductor device comprises a die pad portion; the semiconductor chip disposed over the die pad portion; a lead portion electrically connected to the semiconductor chip; and wherein the first sealing portion covers the die pad portion, the semiconductor chip and the lead portion and exposes a part of the lead portion from an outer surface of the first sealing portion (see col. 4, line 18 to col. 7, line 64).

Re claim 25: Gogami teaches wherein the second sealing portion has a portion molded to the case (see col. 4, line 18 to col. 7, line 64).

Re claims 26 and 31: Gogami teaches wherein the second sealing portion has a portion molded to the wiring substrate and a portion molded to a peripheral edge of the wiring substrate (see col. 4, line 18 to col. 7, line 64).

Re claims 27, 29, and 30: Gogami teaches wherein the second sealing portion has a first portion bonded to the case and a second portion bonded to the wiring substrate; and wherein the second sealing portion is bonded to peripheral edge of the wiring substrate (see col. 4, line 18 to col. 7, line 64).

Re claim 28: Gogami teaches wherein the first and second portions of the second sealing portion are unitary with each other (see col. 4, line 18 to col. 7, line 64).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwasaki et al (US 5,866,950) discloses a semiconductor package and fabrication method.

Tsukahara (US 6,780,668) discloses method of manufacturing a semiconductor device package.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to April A. Taylor whose telephone number is (571) 272-2403. The examiner can normally be reached on Monday - Friday from 6:30AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [april.taylor@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Art Unit: 2876

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
April Taylor  
27 December 2004



KARL D. FRECH  
PRIMARY EXAMINER